

CLAIMS

1. Adaptive cruise control apparatus (1) for controlling distance of a vehicle from a target, the vehicle being equipped with a target range measuring device (2), a vehicle speed measuring device (3), a braking system (4) and a throttle controller (6), characterised in that the apparatus (1) includes, a look-up table (8) containing pre computed brake demand values for given target ranges and vehicle speeds, and a controller (7) for receiving target range and vehicle speed values from the target range measuring device (2) and the vehicle speed measuring device (3) respectively, and being adapted to select, from the look-up table (8), a brake demand value relating to the received target range and vehicle speed values for application to the braking system (4).
2. Apparatus as claimed in claim 1 in which the look up table (8) further contains pre-computed vehicle speed demand values for given target ranges and in which the controller (7) is further adapted to select from the look-up table (8) a vehicle speed demand value for application to the throttle controller (6).
3. Apparatus as claimed in claim 2 in which the controller (7) incorporates a state machine (9) for forcing the selected vehicle speed demand value to zero when a selected brake demand is non-zero.
4. A vehicle incorporating the adaptive cruise control apparatus (1) of any preceding claim.
5. A method for controlling the distance of a vehicle from a target, the vehicle being equipped with a target range measuring device (2), a vehicle speed measuring device (3), a braking system (4) and a throttle controller (6), characterised in that the method includes the steps of;

receiving a target range value from the target range measuring device (2),

receiving a vehicle speed value from the vehicle speed measuring device (3),

selecting from a look-up table (8) containing pre computed brake demand values for given target ranges and vehicle speeds, a brake demand value relating to the received target range and vehicle speed values,

and applying the selected brake demand value to the braking system (4).

6. A method as claimed in claim 5 including the further step of selecting a pre-computed vehicle speed demand value from a look-up table (8) containing vehicle speed demand values for given target ranges,

and applying the selected vehicle speed demand value to the throttle controller (6).

7. A method as claimed in claim 6 including the further step of forcing the selected vehicle speed demand value to zero when a selected brake demand value is non-zero.